

We Claim:

1. An ultrasound applicator for applying
ultrasound energy to the thoracic cavity comprising
a housing sized for placement on a chest on or
near the sternum,

5 an ultrasound transducer carried within the
housing to transcutaneously apply ultrasound energy to
the thoracic cavity, the ultrasound transducer being
sized to provide a power density not exceeding 3
watts/cm² at a maximum total power output of no greater
10 than 200 watts operating at a fundamental therapeutic
frequency not exceeding 500 kHz, and

an assembly worn on the chest and adapted to
be affixed to the housing, to stabilize placement of the
housing on the chest during application of ultrasound
15 energy.

2. An applicator according to claim 1
wherein the assembly includes a quick release
mechanism.

3. An applicator according to claim 1
wherein the assembly includes a quick release
material.

4. An applicator according to claim 1
wherein the assembly comprises a sling worn
between the waist and shoulders.

5. An applicator according to claim 1
wherein the assembly includes a halter worn
about the chest and shoulders.

6. An applicator according to claim 1
wherein the assembly includes spaced apart
members near the housing that allows another treatment
device to be placed on the chest near the applicator.

7. An applicator according to claim 1
wherein the housing includes a chamber to hold
fluid about the ultrasound transducer.

8. An applicator according to claim 1 wherein the housing accommodates circulation of fluid about the ultrasound transducer.

9. An applicator according to claim 1 wherein the housing includes an ultrasound conducting interface.

10. An applicator according to claim 1 wherein the housing includes a contour-conforming interface with skin.

11. An applicator according to claim 1 wherein the housing includes a skirt that spaces the ultrasound transducer from contact with skin.

12. An applicator according to claim 1 wherein the housing includes an ultrasound-conducting membrane for contacting skin.

13. An applicator according to claim 1 wherein the housing is elongated along the axis of the sternum.

14. An applicator according to claim 1 wherein the housing includes a coupling assembly to releasably couple the ultrasound transducer to an external electric signal generating machine.

15. An applicator according to claim 14 wherein the coupling assembly includes a quick coupling mechanism.